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Building a National Health Information Infrastructure: A Newsmaker Interview With William Yasnoff, MD, PhD

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July 11, 2003 — *Despite the growing evidence that confirms the cost and quality benefits of electronic health information systems, widespread adoption has remained frustratingly slow. The \$1.3 trillion industry's sluggish response is attributed to a variety of factors, including skimpy hospital operating margins, physicians' reluctance to depart with paper medical records, and the risk of investing in expensive but quickly outmoded information systems.*

But one of the major barriers — a common medical vocabulary that permits clinical information to be shared easily among various parties — has just begun to fall. On July 1, the U.S. Department of Health and Human Services (HHS) announced that it had entered into a five-year, \$32.5 million contract to acquire the license to SNOMED, a classification system with more than 340,000 terms for medical conditions and concepts. Developed by the College of American Pathologists, SNOMED, or the Systematized Nomenclature of Medicine, will be available free of charge through HHS' National Library of Medicine.

HHS also announced at its June 30-July 2 National Health Information Infrastructure 2003 meeting that it would work with the Institute of Medicine to develop a prototype electronic medical record (EMR). The prototype, to be available free of charge upon completion, will also recommend a standard method for transmitting the entire body of information contained within an EMR to eliminate the need to conduct multiple transactions.

To help understand how these developments will affect clinician practice, Medscape's Cathy Tokarski interviewed William A. Yasnoff, MD, PhD, senior advisor, National Health Information Infrastructure, in HHS' Office of Science and Data Policy. Dr. Yasnoff chaired the health information infrastructure meeting at which these initiatives were unveiled. Background information for the meeting is available at <http://www.nhii-03.s-3.net/materials.htm>. HHS' health information infrastructure Web site can be accessed at <http://aspe.hhs.gov/sp/nhii/>.

Medscape: What is the significance of the agreement by HHS to license the SNOMED medical terminology system?

Dr. Yasnoff: It's definitely a major and important step. It's clear that if we're going to be able to assemble patient information electronically and make it available at the point of care whenever we need it, we have to call the same condition by the same term whenever we see it.

Medical terminology is large and complicated. SNOMED is the most comprehensive vocabulary that exists, with over 340,000 concepts. People want to use a standardized vocabulary, but the barrier has been the cost. Naturally, there's a cost involved in developing [a vocabulary] and anyone who develops one needs to pass that cost on. With this agreement, the government has licensed SNOMED not for its own use but for the use of any and all comers.

Medscape: How will the availability of this license move adoption of information systems forward?

Dr. Yasnoff: In addition to the suite of health informatics standards announced in March (for electronic messaging, imaging, and clinical laboratory tests), this essentially represents the building blocks to facilitate interoperability of electronic health records. That doesn't automatically create interoperability of electronic health records. If you think of this as building a skyscraper, you have to first have a strong foundation before you build a huge building. The standards represent the foundation. You still don't have a building, but without the standards, you won't be able to build a skyscraper.

Medscape: How does HHS intend to get the private sector to follow the government's lead on this?

Dr. Yasnoff: There has been a very strong demand for this type of action in [standardizing a] medical vocabulary for some time. It hasn't just come from hospitals, doctors, and public health agencies, but also from the vendors of electronic health systems and others who are in the position of having to pay

license fees.

I think the bigger question as we move forward is how are we going to "build the building?" Everyone agrees that this should be a voluntary effort, and not a regulatory initiative like HIPAA. If you're going to have a volunteer effort, the first thing you want to do is ask volunteers what they're volunteering for. All of the presentations that summarize recommendations from key stakeholders are on our Web site and we're in the process of analyzing them.

Medscape: Has any consensus emerged on how to move forward?

Dr. Yasnoff: Clearly, there are some areas where we know things need to be done. We need to look at the area of financial incentives, since it appears that one of the key obstacles to physician adoption of EMRs is cost. It also may be that the benefit to the physicians is seen as too low.

If you dig a little deeper, what you find is that electronic health systems benefit other parties in the healthcare system besides the physician. For example, a study in Santa Barbara, California, found that 20% of laboratory and x-rays were repeated because the tests results were not available at the time they were needed. Also, one in seven hospitalizations took place because a piece of information about a patient wasn't available. In both cases, the hospitals and payers benefit from identifying these instances of inappropriate use.

Medscape: Doesn't the incentive to reduce medical errors serve as reason for doctors to want to use EMRs and other electronic systems?

Dr. Yasnoff: It's not a big selling point yet because the error rate is so low for individual doctors that they just don't see it.

Calling them errors implies that they are mistakes in judgment, when in reality, a lot of them are incorrect actions precipitated by incorrect information. Doctors barely have time to make the decisions that they're making. Even those who understand in theory that they could practice better medicine with these tools still face the dilemma that the primary benefits go elsewhere. It's like asking people to redirect their retirement savings to someone else. That's got to be fixed.

Medscape: Why is HHS moving ahead with a prototype EMR?

Dr. Yasnoff: The idea is to define the functional model of the electronic record. Let's say an electronic record has 382 possible functions, but only a certain number of them are essential and the rest are optional. In addition, the project is going to look at a standard for transmitting the entire record. That is important in

the following sense — the exchange of patient information very commonly involves sending the entire record. Now, there isn't a standardized way of doing it, and you could generate thousands of transactions just to send one record.

By creating that kind of a specification, it allows vendors to provide the interoperability to exchange data but to maintain systems they want to have to improve products within their own systems. A good analogy is ATM machines. You have multiple manufacturers of these machines, but an interface to the ATM network that is the same for all machines. The transaction that connects your machine will be the same. In that way you preserve the ability of the private sector to innovate and to move forward, but at the same time, you have the ability to have interoperability.

Medscape: What timeframe is reasonable for accomplishing these goals?

Dr. Yasnoff: There is no question that we are going to have a national health information infrastructure, the only question is when. Our challenge from HHS and everyone else is what can we do to get it done sooner, faster. Realistically, this will take some years. On the other hand, if we're thoughtful and we collaborate together and we align incentives, we can get a lot of benefits relatively quickly.

There's no agreement that we're not there. It's going to be a judgment call when we're there, and it will be several years. The Secretary [Tommy Thompson] is very impatient, and he is a strong advocate of electronic health information. It's incredible to him that more sophisticated technology is available in most grocery stores than in most hospitals. I can't disagree with him.

Reviewed by Gary D. Vogin, MD